

STUDIES ON IDIOCERINAE LEAFHOPPERS, XVIII: FOUR
NEW GENERA AND SPECIES FROM GUYANA,
SOUTH AMERICA (HOMOPTERA: CICADELLIDAE)

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Abstract.—*Hyalocerus aurantius*, *Luteobalmus maculatus*, *Pseudoidioscopus bipunctatus*, and *Corymbonotus bicolor* are new species in monobasic new genera described from Guyana, South America. Their morphology is discussed and illustrated and they are compared with allied genera and species.

Four new genera are described below from material from Guyana, formerly British Guiana. The specimens were loaned to me for study by Dr. W. L. Knight, from the British Museum (Natural History) where the types are deposited. Paratypes are in my collection (JMC) and in the U.S. National Museum (USNM).

In the descriptions that follow 13 micrometer units are equivalent to 1.0 mm. Throughout the text, in order to save space, I use UFS to mean the upper frontal sutures of the postclypeus (Fig. 28). Following Young (1968) I use r_1 , r_2 , r_3 , and r_4 to respectively identify the upper-inner, upper-outer, lower-outer, and lower-inner row of spines of the metatibia. All the species have the vertex finely shagreen and the metafemur has two apical and no subapical spines.

Hyalocerus Maldonado-Capriles, new genus

Type-species: *Hyalocerus aurantius* Maldonado-Capriles, new species.

Forewing semitransparent, grayish; veins of basal $\frac{1}{2}$ of corium barely visible, concolorous with corium; veins of apical and subapical cells dark. Vertex relatively long, $3\times$ as wide as long (12:4). Pronotum about $2.5\times$ as wide as long (19:7), posterior margin broadly and shallowly concave. Scutellum wider than long (14:11). Face wider across eyes than long (21:18); ocelli apart at $2\times$ distance from ocellus to eye (6:3); UFS curved, reaching about midway to ocellus of corresponding side; lateral margins of postclypeus angled at about midlength; anteclypeus bellshaped, slightly longer than wide apically (5:4). Lora semicircular, not elevated. Gena with margins straight. Forewing with 4 apical, 2 anteapical, and 1 discal cell; inner apical $2\times$ as long as outer and with basal cross vein very tenuous. Spines of metatibia: r_1 and r_3 with 12-14 fine, r_2 with 4-6 strong, and r_4 with 25-30 hairlike spines. Length 4.9 mm.

Male Genitalia.—Valve flattened laterally at apex, long pilosity along apical $\frac{1}{2}$ of upper margin. Pygofer triangular; upper margin membranous,

with a thickened caudal projection on lower margin of membranous area. Aedeagus, slender, its apex slightly curved cephalad; hind margin serrate in lateral aspect; without socle. Connective V-shaped. Style very deep, lower outer apical ledge produced, thumblike and with strong straight apical setae. Valve rectangular, hind margin very slightly concave. Tenth tergum relatively short, each posterior lower angle produced downward into long fine projection (Fig. 6).

Female.—Coloration and shape about as in male. Genitalia with 7th sternum rectangular, posterior margin slightly convex; pygofer 1.5× longer than abdominal sterna together (14:10); ovipositor surpassing pygofer by 2× its width.

Male genitalia separate it from other idiocerine genera with ocelli apart at twice the distance from ocellus to eye. The generic name makes reference to the semitransparent, delicate appearance of the forewings; the ending *cerus*, meaning antenna, is commonly used in naming idiocerine genera. It can be separated from other genera discussed in this paper by the characters in the key.

Hyalocerus aurantius Maldonado-Capriles, new species
(Figs. 1-8)

Male.—Vertex, pronotum, and scutellum orange; with a black longitudinal stripe from behind inner margin of eye extending to about mid-length of scutellum; scutellum apically yellow. Face fading from orange above to yellow at apex. Pleurae and legs yellowish; abdominal sterna with a pinkish tinge; with blackish as follows: Basal inner angle of corium, claval suture, and middle longitudinal vein of corium. Genitalia as in Figs. 1-6. Length 4.9 mm.

Female.—Coloration and shape as in ♂. Vertex 3× as wide as long (12:4); pronotum 3.5× as wide as long (21:6.5); scutellum much wider than long; face slightly wider across eyes than long (22:20); post- and anteclypeus as in ♂. Ocelli apart at 2× distance from ocellus to eye (6:3). Length 5.1 mm. Genitalia as described for genus.

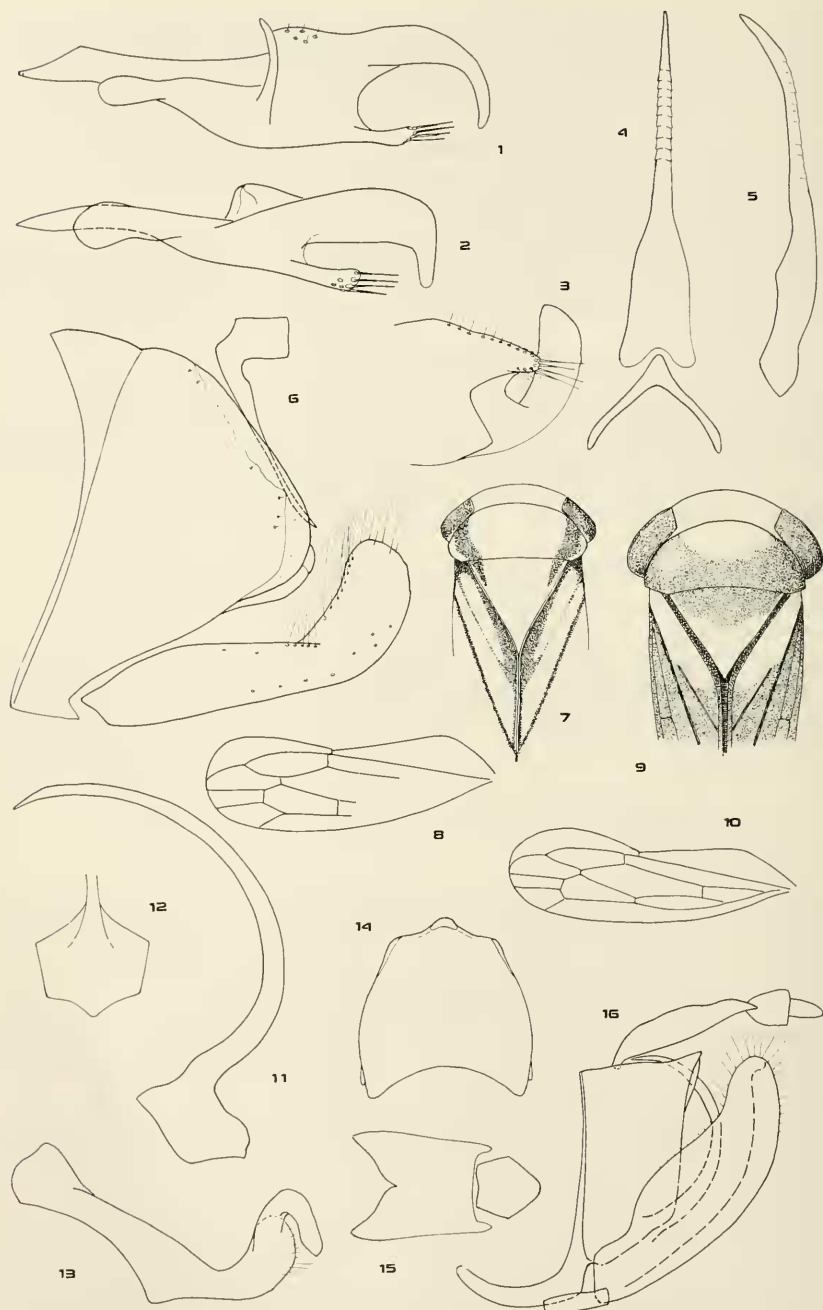
Holotype.—♂, British Guiana, near Mazaruni Hd, Pakaraima Mts., 1932, J. G. Myers. *Allotype*.—♀, same data. Paratypes 5: Same data, 1 ♂ in JMC; 1 ♀ from upper R. Pachitea, Peru, in the USNM.

The orange head, pronotum, and scutellum, the striking coloration of the forewings, and the genitalia easily distinguish this species.

Luteobalmus Maldonado-Capriles, new genus

Type-species: *Luteobalmus maculatus* Maldonado-Capriles, new species.

Vertex greenish yellow, remaining parts of face stramineous. Pronotum anteriorly with a semicircular greenish yellow area that extends from inner



Figs. 1-8. *Hyalocerus aurantius*. 1, style, lateral. 2, style, dorsal. 3, apex of style, ventral. 4, aedeagus and connective, caudal. 5, aedeagus, lateral. 6, genital capsule,

margin to inner margin of eyes; remaining parts brown. Forewings mostly transparent with a grayish brown tinge; veins dark brown; anterior $\frac{1}{2}$ of clavus yellow. Vertex about $2\times$ as wide as long (9:4); anterior and posterior margins parallel; pronotum about $2.5\times$ as wide as long (16:6), posterior margin shallowly concave. Scutellum slightly wider than long (12:10). Face slightly wider than long (19:18); anteclypeus bellshaped, longer than wide apically (5:3); lateral margins of postclypeus angled before midlength, UFS straight not reaching ocellus of corresponding side. Ocelli at about $2\times$ the distance from ocellus to eye (6:3). With short hairlike spine laterally below each eye. Lora flat, inconspicuous; lateral margin of gena shallowly concave. Forewing with 4 apical, 2 anteapical, and 1 discal cell. Tibiae oval in cross-section; spines of metatibia: r_1 and r_3 with 15–17 fine long, r_2 with 6–7 moderately strong, and r_4 with 35–40 short hairlike. Length 4.2 mm.

Male Genitalia.—Pygofer quadrangular in lateral aspect; upper apical angle produced mesad and sclerotized at apex. Aedeagus long, slender, curved cephalad, moderately wide at base. Valve in lateral aspect deepest at midlength, lower margin produced mesad at apex. Style as in Figs. 17 and 18. Tenth tergum long, flattened.

Female.—Coloration and shape much as in δ . Ovipositor about $5\times$ as long as abdominal sterna together, surpassing apex of wings; 7th sternum notched medianly.

Optocerus Freytag has a strong spinelike hair laterally below each eye whereas *Luteobalmus* has in some specimens a delicate hairlike spine in the corresponding position. The first genus has the outer apical cell pedunculate and the second has all apical cells quadrangular. In *Luteobalmus* the extremely long ovipositor of the female is striking, the produced apex of the valve is unusual, and the elongated nearly flattened tenth tergum is distinctive. The broken protective coloration of this genus, afforded by the yellowish on the clavus, is also found in the Pacific *Brachylorus*, *Meroleucocerus*, *Philippocerus* and *Idioscopus clavosignatus*. The name of this genus literally means anointed with yellow.

Luteobalmus maculatus Maldonado-Capriles, new species
(Figs. 9–16)

Male.—Vertex and forewings as described for genus. Scutellum anteriorly with a semicircular brown spot, remaining portion yellow. Apical

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lateral. 7, anterior half, dorsal. 8, forewing. Figs. 9–16. *Luteobalmus maculatus*. 9, anterior half, dorsal. 10, forewing. 11, aedeagus, lateral. 12, base of aedeagus, caudal. 13, style, lateral. 14, connective, dorsal. 15, tenth tergum, dorsal. 16, genital capsule, lateral.

$\frac{1}{2}$ of 1st costal cell blackish brown. Pleurae, legs, and abdominal sterna pale stramineous.

Female.—Coloration as in δ . Vertex slightly over $3\times$ as wide as long (10:3); pronotum about $2.5\times$ as wide as long, posterior margin nearly straight; scutellum wider than long (13:11). Head slightly wider across eyes than long (20:18); postclypeus and anteclypeus as in δ ; ocelli apart at $2\times$ distance from ocellus to eye. Length 4.7 mm. Genitalia as in Figs. 11-16.

Holotype.— δ , British Guiana, New River, 750 ft, 26 March-2 April, 1938; C. A. Hudson collector. *Allotype*.— η , same data. Paratypes 5: from New River, same data as holotype, 2 with different dates; 1 δ in JMC.

The extensive yellowish area on the vertex and pronotum distinguish this species.

Pseudoidioscopus Maldonado-Capriles, new genus

Type-species: *Pseudoidioscopus bipunctatus* Maldonado-Capriles, new species.

Vertex stramineous, vitreous areas well defined. Pronotum grayish. Scutellum grayish on anterior $\frac{1}{2}$, mostly yellow on posterior $\frac{1}{2}$; triangular spot near each lateral angle lined with brown. Forewing hyaline, about same color of pronotum, with a brownish or grayish tinge; veins brownish, more conspicuous basally than apically.

Vertex with anterior and posterior margins parallel, curved, $7\times$ as wide as long (14:2). Pronotum $2.7\times$ as wide as long (22:8), posterior margin shallowly concave. Scutellum wider than long (15:10). Face wider across eyes than long (26:21); postclypeus with lateral margins angled at about midlength; UFS straight, ending just below ocellus of corresponding side. Anteclypeus bellshaped, slightly longer than wide apically (5:4). Ocelli apart at slightly less than $2\times$ distance from ocellus to eye (7:4). Spines of metatibia: r_1 —16 fine; r_2 —5 strong, the 1st 1 apart from the rest; r_3 —10 fine; and r_4 —35-40 hairlike spines about $\frac{1}{3}$ as long as diameter of segment, the last as large as those in r_1 .

Male Genitalia.—Valves with broad apex upcurved, as in Fig. 22. Aedeagus sickleshaped, slender, base slightly broad. Connective subtriangular, flattened. Pygofer with longitudinal fracture, semicircular, as in Fig. 21. Tenth tergum extending on each side into a complex pointed structure (Fig. 23). Style as in Figs. 17 and 18. Valve rectangular, posterior margin straight. Length 4.5 mm.

Female.—Coloration and shape much as in δ . Seventh sternum about as long as last 2 sterna together, apical margin convex. Ovipositor slightly surpassing pygofer. Length 4.8 mm.

With the general appearance of the Indian *Idioscopus*, hence the name

Pseudoidioscopus, and of some small *Idiocerus* as *I. capnus* Freytag. Their genitalia are totally different; the broad upcurved apex of the valve is unique. It can be separated from the genera discussed in this paper by the characters in the key.

Pseudoidioscopus bipunctatus Maldonado-Capriles, new species
(Figs. 17-24)

Male.—Vertex with short dash of brown medianly on hind margin. Pronotum with small brown spot near anterolateral angle, stramineous on lateral margin and along anterior margin to about midway between eye and median line. Scutellum with or without YY-brownish mark on disc. Face yellowish; vitreous areas and brown dash on vertex visible in front view; postclypeus with row of brownish spots each side of median line. Propleura brownish; meso- and metapleura straw colored or yellowish. Legs light brown; metatibia yellowish with brown spines. Abdominal sterna; first yellow, others pinkish; pygofer stramineous or grayish. First tergum yellow, next 3 black. Dimensions as described for the genus.

Female.—Shape and general coloration as in δ . Vertex $5\times$ as wide as long (15:3). Pronotum $2.5\times$ as wide as long (23:9); scutellum $1.5\times$ as wide as long (16:10). Face across eyes slightly wider than long (23.5:22), postclypeus relatively broad, from ocelli to apex as long as wide across to base of UFS (11:11). Pygofer bare, slightly longer than abdominal sterna together (15:13); 7th sternum about as long as last 2 together, apical margin convex. Length 4.9 mm.

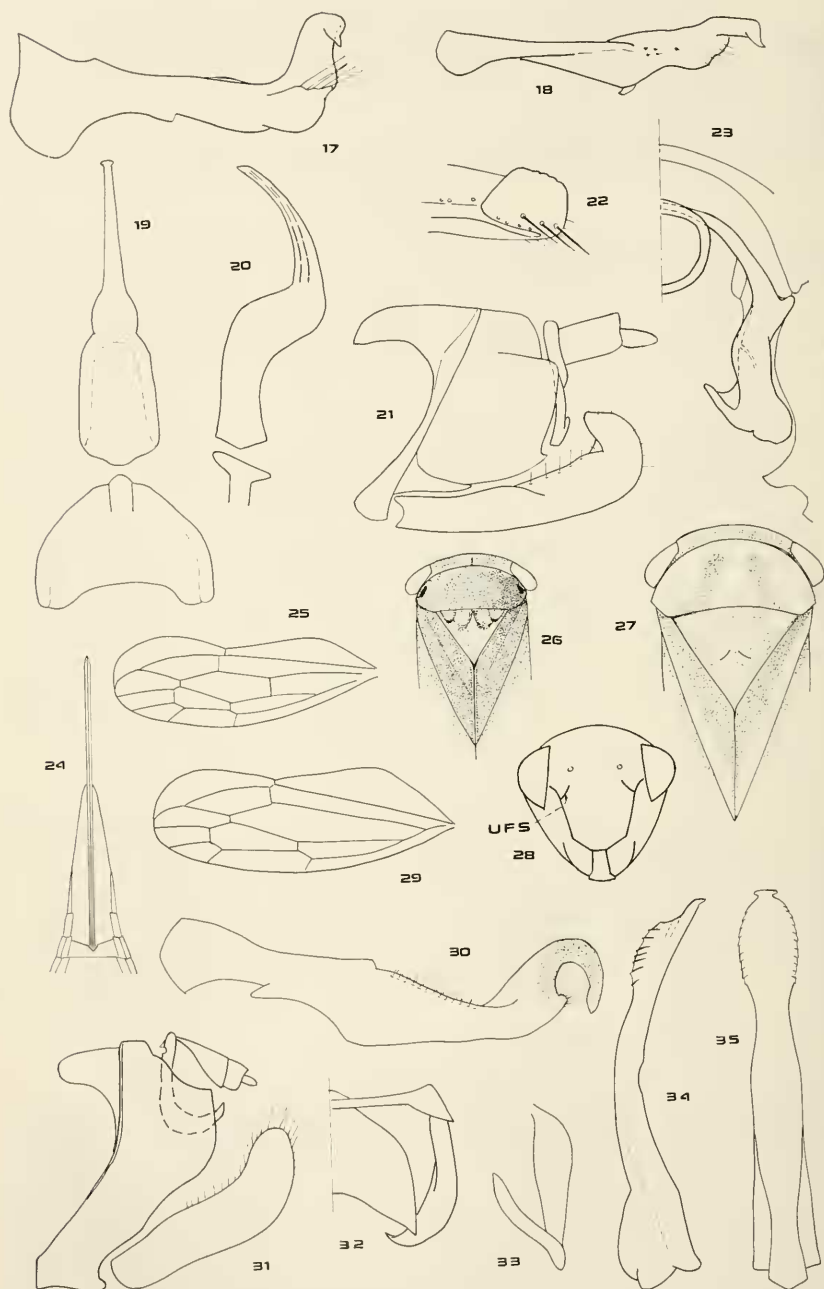
This species somewhat resembles *Idiocerus minutus* Osborn, but this species has two spots behind each eye and its face and pronotum are ornamented with reddish. The triangular spots of the scutellum are lined with brown not solid in color which is the usual condition.

Holotype.— δ , British Guiana, New River, 750 ft, May 4-5, 1938, C. A. Hudson collector. *Allotype*.— η , March 26-April 2, 1938, C. A. Hudson. Paratypes 8: Seven, 1 η labeled as allotype; 1 δ , labelled as holotype, in JMC.

Corymbonotus Maldonado-Capriles, new genus

Type-species: *Corymbonatus bicolor* Maldonado-Capriles, new species.

Head, pronotum, and abdomen yellow; vertex and forewing ornamented with red. Vertex with margins parallel, $6\times$ as wide as long (19:3); pronotum elevated toward apical margin, slightly over $2\times$ as wide as long (30:14), posterior margin shallowly and broadly concave. Scutellum slightly elevated and swollen, wider than long (22:19). Forewing with 4 apical, 2 anteapical, and 1 discal cell, Fig. 29. Spines of metatibia: r_1 and r_3 respectively 12 and 17 finer, r_2 strong, r_4 35-50 hairlike spines. Face about



Figs. 17-26. *Pseudoidioscopus bipunctatus*. 17, style, lateral. 18, style, dorsal. 19, aedeagus and connective, dorsal. 20, aedeagus, lateral. 21, genital capsule, lateral. 22, apex of valve, dorsal. 23, appendix of tenth tergum, caudal. 24, genitalia, female.

as wide across eyes as long (32:31); UFS straight, reaching to below and slightly mesad of ocellus of corresponding side; ocelli set apart at $1.5\times$ distance from ocellus to eye (9:6); lateral margins of postclypeus angled at about midlength; anteclypeus bellshaped, slightly wider apically than long (6.5:6); lora slightly elevated; margin of gena straight.

Male Genitalia.—Plate flattened laterally at apex, with fine pilosity of medium length on upper margin of apical $\frac{1}{2}$. Pygofer subtriangular, deep and short. Tenth tergum flattened, horizontal, with L-shaped projection on each side of basal margin (Fig. 33). Aedeagus straight, vertical, relatively thick, apex expanded and scaly. Style with inner apical projection strongly sclerotized, dark; outer apical ledge produced, long pilosity. Valve rectangular, apical margin straight. Length 6.9 mm.

Female.—General coloration and shape about as in δ . Length 7.1 mm.

The robust size, the somewhat humped appearance, due to the slight elevation of the pronotum and slightly swollen scutellum, and the genitalia help to separate this genus from other idiocerines.

Corymbonotus bicolor Maldonado-Capriles, new species
(Figs. 27–35)

Male.—Vertex with posterior margin pale orange red; pronotum with L-shaped pale orange red marking each side of median line. Scutellum grayish yellow, with grayish triangular area near each basal angle. Lora and gena grayish, the latter with internal margin black. Pleura and legs grayish yellow; femora sometimes brownish basally and along anterior margin. Forewing hyaline, with stramineous tinge; clavus with anal cells orange red, outer cells yellow. Corium with basal angle orange red, veins to before apex of subapical cells hyaline, inconspicuous; apical veins of subapical and apical cells brown. Abdominal sterna and genital capsule yellowish. Dimensions and genitalia as described for genus.

Female.—Shape and coloration as described for genus. Longitudinal lines on pronotum straight; yellow on corium almost lacking. First segment of beak black. Seventh sternum brown medianly. Vertex $7\times$ as wide as long (21:3); pronotum $2.5\times$ as wide as long (31:12); scutellum wider than long (24:20). Face slightly wider across eyes than long (34:33); postclypeus and anteclypeus as in δ . Ocelli set apart at about $1.5\times$ distance from ocellus to eye. Length 7.1 mm.

Genitalia.—Seventh sternum slightly longer than VI, posterior margin

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ventral. 25, forewing. 26, anterior half, dorsal. Figs. 27–35. *Corymbonotus bicolor*. 27, anterior half, dorsal. 28, face. 29, forewing. 30, style, lateral. 31, genital capsule, lateral. 32, tenth tergum, dorsal. 33, appendix of tenth tergum, caudal. 34, aedeagus, lateral. 35, aedeagus, caudal.

shallowly concave; pygofer $\frac{1}{3}$ longer than abdominal sterna together (19:14); ovipositor surpassing pygofers by $2\times$ its width.

Holotype.— δ , British Guiana, Amazon-Courantyne Divide. Head of Orinoco River, H. Beddington collector, 1937. *Allotype*.— η , British Guiana, New River, 750 ft, May 1-4, 1938, C. A. Hudson collector. Paratypes 4 δ δ ; 1 with same data as allotype, in JMC; 3 Katari Sources, January-February 1936, C. A. Hudson collector.

There is a possibility that the yellow areas are greenish yellow in life, either way, the large size, and the coloration easily identify the species.

Key to the New Genera Described in This Paper

1. Ocelli set apart at $2\times$ the distance from ocellus to eye; vertex $\frac{1}{2}$ or more length of pronotum 2
 - Ocelli set apart at $1.5\times$ or less the distance from ocellus to eye; vertex about $\frac{1}{4}$ as long as pronotum 3
2. Outer anteapical cell as wide basally as apically; η with ovipositor about $2\times$ as long as abdominal sterna together; orange and black 3

Hyalocerus n. gen.

 - Outer anteapical cell strongly narrowing basad; η with ovipositor very long, surpassing apex of forewings, $6-7\times$ as long as abdominal sterna together; gray, anterior $\frac{1}{2}$ of clavus whitish

Luteobalmus n. gen.
3. Large, δ 6.9 mm, η 7.1 mm; scutellum large, elevated at base, as long as distance from its apex to apex of clavus 3

Corymbonotus n. gen.

 - Small, δ 4.5 mm, η 4.7 mm; scutellum relatively smaller, not elevated, $\frac{1}{2}$ as long as distance from its apex to apex of clavus

Pseudoidioscopus n. gen.

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